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SPECIAL REPORT

OF THE

STATE INSPECTOR OF MINES

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OF THE

STATE OF WEST VIRGINIA.

1884.



WHEELING: (() Chas. II. Taney, State Printer

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SPECIAL REPORT.

Dego, Kanawita Co., W. Va., December 31, 1884.

To His Executency, Jacob B. Jackson, Governor of West Firginia:

SIR:—In compliance with the ninth section of an Act of the West Virginia Legislature, passed February 22, 1883, entitled "An Act regulating the working and proper ventilation and drainage of coal mines, and providing for the appointment of a mine inspector," I have the honor of submitting to you a special report upon the matters referred to by that part of the above named section which reads: "Ite shall also make such suggestions and recommendations in relation to said mines and the proper legislation relating thereto, as he may deem proper and necessary."

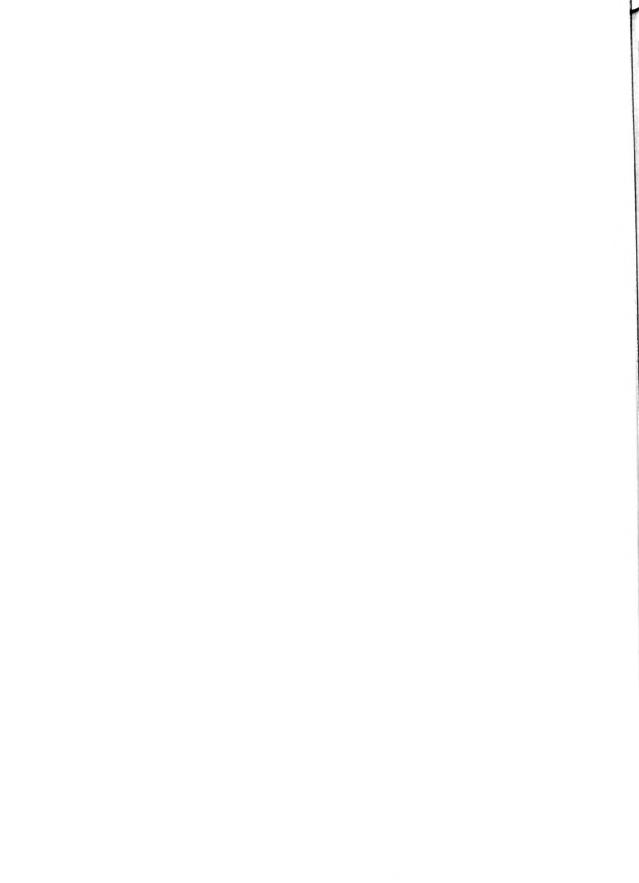
legislation relating thereto, as he may deem proper and necessary."

In my first annual report, I stated that I would "submit to your Excellency, a special report on that subject, in time for the same to be embodied in your message to the next Legislature," and I have endeavored to do so, but have found the subject one of such importance and magnitude, as to require much more time for making a proper report than I had anticipated; hence the lateness of the transmittal of this report. I hope however, that it will be your Excellency's pleasure to have it printed and submitted to our next Legislature, if possible, in time for the same to be acted upon, some time during the session.

In the following report I have endeavored to set forth as clearly as possible, the need of an efficient mining law for our State, and have drawn such a bill as I deem would give us a law, if enacted and entorced, that would insure an efficient and proper system of drainage, ventilation and working of mines in this State.

That such a law is necessary, there can be no doubt in the minds of persons thoroughly acquainted with the manner in which the mines, generally, in this State have been heretofore, and are now being operated; even with persons not so familiar with the mines, it should not be a matter of uncertainty, especially if they but call to mind the terrible calamities happening so frequently in the mines of our own and other countries. But it may be urged that the mines of our State, or at least the majority of them, are not liable to explosions, as very few of them are shaft mines, and that drift mines, as a general rule, are exempt from fire-damp. No doubt the proprietors and managers of the ill-fated Pocahontas mine entertained the same ideas until the fatal night of the 12th of March, 1884, when at one hour past midnight, "the report of an explosion resembling the firing of a park of artillery, shook the ground and dwellings around the mine for half a mile. This was followed by a continued runbling sound with Intermitting shocks for fully one and a half minutes. The sleeping inhabitants,

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awakened by the alarming sounds, were terror stricken and slew to realize that a catastrophe unparalleled in the history of American mining, had overtaken the poor fellows at work in the mine." Of the one hundred and fifty (the exact number will never be known) unfortunate victims of this explosion, there were very few who could be recognized, as most of them were either literally torn to pieces or burned to a crisp, by the fire which raged in the mine after the explosion.

The mining industry of West Virginia has been rapidly growing in the last few years, and now that our State ranks fifth in the amount of coal produced during the year 1883, among the twenty-eight States and territories of the Union mining coal, it would seem quite inconsistent that we should not have as good a mining law as several States which we out-rank in production; for instance, the State of Colorado, in which the quantity of coal mined during the year 1883, was only 1,400,000 tons, not quite one half the production of West Virginia, has a very good mining law, which, although not perfect, is decidedly a long stride in advance of ours. In Colorado the services of an inspector of mines are certainly more highly appreciated than here, as the mine inspector of that State receives an annual salary of \$2000, as against \$1200 in West Virginia, where, if the salary were in the same ratio to the coal production of 1883 as it is in Colorado, it would be \$4000 per annum.

As stated in my annual report, there are at present two widely separated mining regions in this State, in one of which, the "Kanawha district," there are now sixty-five mines; while in the other, the "Northern district," there are sixty-seven mines. At present it is next to impossible to go from one of these mining regions to the other in less time than two days, and the trip has to be made by a very circuitous route, if one travels by railroad. Considering the duties to be performed and the amount of traveling to be done, I claim that it is impossible for one inspector to do all the work that should be done to enforce the present mining law, which, by the way, is in my opinion entirely inadequate. It would keep one inspector in each district constantly going to have all the mines in the State properly inspected once in every three months, which is certainly not too often. If besides inspecting the mines, the inspector is required to collect the statistics for and make an annual report, collect the maps of the various mines and see that they are extended at the end of each half year, so as to show the progress of the mines during the preceding six months, and attend to such legal proceedings as may be necessary for the enforcement of the law, then one or the other branch of the service must be neglected. Therefore, I think that the proper method for arranging an inspecting force for this State, is to copy after the example set by Ohio (though on a smaller scale) where there is one chief inspector to whom the district inspectors report, and from whom they receive instructions as to the methods and systems to be followed in their inspections, and to whom they may apply for assistance or counsel when needed, and who attends to collecting statistics for and making the annual report, and to the collection of the maps of the mines, besides making personal inspections of mines when the time can be spared from his other duties; in other words there is a *system*, and to the system a head. There are in Ohio, a chief inspector and three district inspectors, whose salaries are \$2400 per annum for the chief, and \$1200 cach for the district inspectors, which with their expenses (shown by the inspector's report for the year 1883 to have been \$700 each) makes the total eost of the inspecting force \$8800 per annum. In the State of Pennsylvania there are six inspectors at \$2000 each per annum, and six others at \$3000 each per annum, besides there is a clerk allowed each set of inspectors, so that the total annual cost for the inspecting force of Pennsylvania is \$35,000.

Although the cost of inspection in West Virginia would, as proposed in the bill which I have drawn, seem onerous, yet it is impossible to have the mines inspected as often as they should be, and have the other duties attended to properly, without such a force as I recommend; but the same number of inspectors will be able to attend to the same duties for a much

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greater number of mines than we have now, after an adequate and effective mining law has been gotten into proper "working order."

In order to make evident the necessity for ventilation, I cannot do better, under the present circumstances, than to refer your Excellency to the chapter on ventilation in my annual report, in which, under the heading "Why men breathe to live," is clearly explained the necessity for pure air in the lungs and the quantity needed for the health of persons employed in mines, and why a greater quantity is needed there than in the open air; under the headings "The theory of mine ventilation," and "Ventilating powers," the need of some artificial means to produce ventilation and what those means are is made plain; under the heading "Ventilating arrangements," it is shown that a mine should not be ventilated by only one current, especially if the mine contains fire-damp, or in other words explosive gas; and the danger from the use of a furnace in a mine in which there is fire-damp, is fucidly set forth under the heading "Furnace versus Mechanical ventilation."

I most earnestly beg that the above named chapter of my annual report be read and considered as part and parcel of this report, as it would take too much time to embody it here, now that the date for the opening of the the next session of our Legislature is so near at hand; besides, I hope that each member of the Legislature will be furnished a copy of the annual

report.

In many mines and parts of mines, on account of the presence of explosive gas, it is extremely dangerous to use any light other than that of a safety-lamp; and such being the ease, it is evident, that unless kept in a secure condition and carefully used, a safety-lamp is little if any safer than a maked light; in fact too much care cannot be exercised in the working and ventilation of gaseous mines, and therefore it is in the highest degree important that the laws relating to this subject should be explicit and stringent, so as to require that every person in such a mine shall do his duty and his whole duty.

On January 24, 1884, there was an explosion of fire-damp in the "Crested Butte" mine in the State of Colorado, by which tifty-nine persons were killed. "According to the evidence given at the coroner's inquest the fire-boss had found two boards broken from a brattice in a room and considerable gas in the head of the drift, and had given the man who was to work in there, positive orders not to enter until he returned and repaired the brattice. He came out to get tools, but before he got back the explosion occurred. The presumption therefore is that the man who had been so warned, went to the face of the working, and with a naked light, ignited the gas, enusing the explosion.

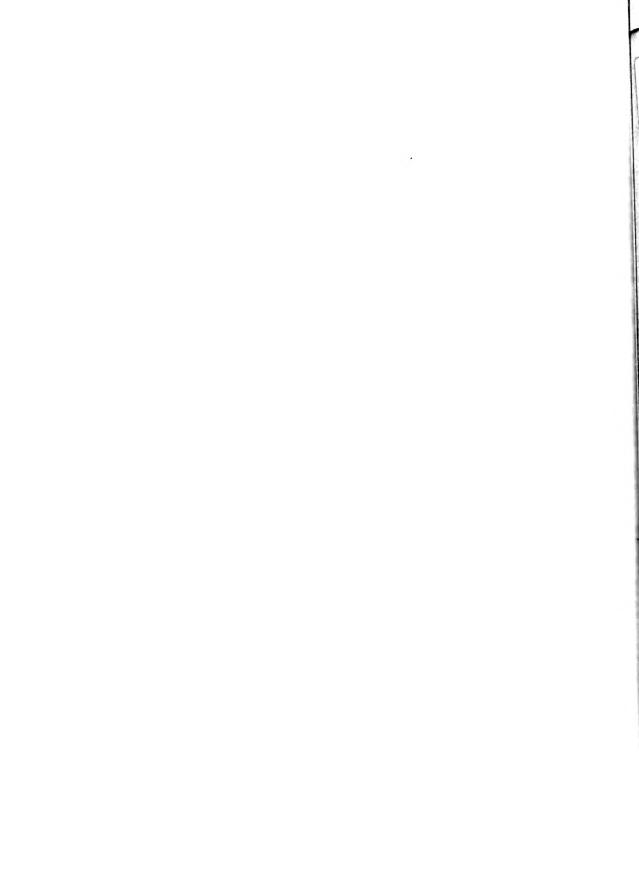
On February 20, 1884, nineteen persons were killed by an explosion in the West Leisenring mine of Fayette county, Pennsylvania, caused by

neglect of duty and ignorance on the part of the mining boss and fire boss. At one o'clock on the morning of March 13, 1884, the terrible Pocahontas explosion occurred, by which nearly one hundred and fifty persons lost their lives. And this was an explosion of — what? has not yet been satisfactorily determined, but there can be no doubt, at least in my mind, that coal dust was a large factor therein, if not the prime cause of the explosion. At any rate, it is a dreadful warning and should alone be sufficient reason for the enactment of very stringent clauses in our mining law with respect to the methods and means of working and ventilating the mines and the manner in which safety-lamps and powder or other explosives shall be used in such mines as may contain tire-damp and coal dust.

At Uniontown, Pennsylvania, an explosion occurred on the 27th day of October, 188t, whereby fourteen persons were killed and eight seriously injured. This explosion was caused by the negligence of the mining boss, who failed to properly ventilate the mine, and to have the same inspected

every morning, by a competent person, with a safety lamp.

So we have a total of between two hundred and twenty-two and two hundred and forty-six persons killed by explosions, in the Slates around us, during the year 1884; two of the States in which these explosions occurred join



West Virginia; there were, therefore, at least one hundred and fifty persons killed in explosions which occurred in the two States bordering on ours. Unless we have an efficient mining law, in every respect, I shall not be in the least supprised to hear of some such calamities in our State in the near future. We have five shafts, in four of which there is more or less gas; and in one of our *drift* mines there was an explosion on the 27th day of March, 1880, whereby two men were killed and a boy badly burned.

After a careful and unbiased consideration of the foregoing facts, it would seem that there should be no doubt or question in the mind of any one as to the necessity for the enactment of an ample and efficient mining law.

Upon the subject of drainage, I consider it sufficient to state that which I suppose no one will question or dispute, namely: A miner's health will not be improved nor his life prolonged by having to wade through mud and water to get to his work, to labor all day with his feet and often his legs and body wet, and then have to pass through the same slush and water on his way out of the mine, and, if it be freezing weather, reach home with his clothes frozen stiff upon him; nor is it to the best interest of the mine operator that his mules and horses should be wilding all day through mud and water, all of which can be seen in many mines of this State.

In regard to general safety, such as timbering the roadways, the shafts and slopes, and having all machinery and apparatus in good and safe condition at all times, it is merely necessary to state that unless all such pre-eautions are taken, a mine is nothing more nor less than a death-trap, where the workmen are in constant danger of one kind or another, and in which they may all be, at any moment, imprisoned, there to remain till death shall end their frantic but futile struggles for freedom.

There is one more point to which I desire to call the special attention of your Excellency and our honorable Legislature, and that is the *enforcement* of the penalties provided for violations of the mining law. In the bill, which I have drawn and hereto append, I have done my utmost to trame an *adequate* and at the same time a *fair* mining law, and have therein named such penalties for the violation thereof as I deem *just* and *sufficient*; but, unless there is provided some *sure* way of enforcing the penalties, our mining law, instead of being of any benefit to the persons whose health and life it *should be* intended to protect, is a "dead letter" on our statute books, and the inspection of mines is, in that event, a farce, and a foolish waste of the State's funds.

Therefore, I most respectfully but carestly suggest that the mining law be so drawn and enacted, in regard to the enforcement of penalties, as to provide, if possible, a more summary and certain method than that of indictment by a grand jury; such, for instance, as a civil suit before a magistrate or court as a board of arbitrators, consisting of three person competent to judge of the matters brought before them, one of whom shall be selected by the plaintiff, the other by the defendant, and the third by the two first selected, and, that the decision of a majority of the persons composing such board shall be fined and binding, and the failure of either party to the suit to select arbitrators within ten days after the date set by the plaintiff for the trial, shall be deemed a confession of judgment if on the part of the defendant, and shall be deemed a withdrawal of the suit if on the part of the plaintiff

Believing that I have, so far as I am competent, and without bias or prejudice, fear or favor, done my entire duty in the drawing up of this bill and report, I most respectfully submit the same to your Excellency, and hope it may be sanctioned and approved.

OSCAR A. VEAZY,

Inspector of Mines.

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y e e u An Act regulating the working and proper ventilation and drainage of mines, and providing for the appointment of a chief and two district inspectors of mines.

Be it enacted by the Legislature of West Virginia:

Section 1. For the purpose of facilitating an efficient and thorough inspection of the mines in West Virginia, and to provide an adequate inspecting force therefor, the State is hereby divided into mining districts, as follows:

The counties of Hancock, Brooke, Ohio, Marshall, Wetzel, Monongalia, Preston, Tyler, Marion, Wood, Pleasants, Ritchie, Doddridge, Harrison, Taylor, Mineral, Hampshire, Morgan, Berkèley, Jefferson, Wirt, Calhoun, Gilmer, Lewis, Barbour, Tucker, Grant, Hardy, Upshur, Randolph and Pendleton, shall compose the first district.

The counties of Mason, Jackson, Cabell, Putnam, Roane, Braxton, Webster, Wayne, Lincoln, Kanawha, Clay, Nicholas, Pocahontas, Logan, Boone Raleigh, Fayette, Greenbrier, Wyoming, Summers, Monroe, McDowell

and Mercer, shall compose the second district.

Section 2. The Governor shall appoint one chief inspector of mines for this State, who, with the approval of the Governor, shall appoint two district inspectors of mines; the chief inspector shall hold his office for the term of four years, and the district inspectors shall hold their office for the term of three years, from the first day of May after their respective appointments, and until their successors are appointed and qualified; the first appointments hereunder, shall be made within thirty days from the passage of this act; in case of the resignation, removal or death of the chief inspector, or any district inspector, the vacancy shall be filled in the manner above provided for original appointments, for the unexpired term only, of the position so made vacant. No person shall be appointed chief inspector of mines, unless he is a mining engineer, a resident of this State, and has a competent knowledge of the different systems of working, draining and ventilating mines, and of the nature and properties of the noxious and poisonous gases of mines, particularly fire-damp, and of the best means of removing such gases from mines, and of preventing accidents therein; and no person shall be appointed district inspector of mines, unless he be a resident of the district for which he is appointed, for at least five years, and is possessed of a practical knowledge of the best modes of working, draining and ventilating mines, of the means of detecting the pressure of bad or foul air, noxious and poisonous gases, particularly firedamp, and of the best means of removing such gases from mines and of preventing accidents therein.

Section 3. Before entering upon the discharge of the duties of their respective offices, the chief inspector and district inspectors shall give bond to the State, the former in the sum of four thousand dollars, and the latter in the sum of two thousand dollars each, to be approved by the Governor, conditioned for the faithful and impartial discharge of their duties respectively; said bonds, with an oath of office on each, that he will support the Constitution of the United States and the Constitution of the State of West Virginia, and that he will faithfully and impartially and to the best of his ability, discharge the duties of his office during his continuance therein, and with the approval of the Governor endorsed thereon, shall be forthwith deposited with the Secretary of State; the inspectors while in office, shall not act as agent, manager or mining engineer for any person or firm operating any mine, or be in any way interested in operating any mine.

SECTION 4. The chief inspector shall receive a salary of eighteen hundred dollars per annum, and his necessary traveling and office expenses, which shall not exceed five hundred dollars per annum; the district inspectors shall each receive a salary of twelve hundred dollars per annum, and his necessary traveling expenses, which shall not exceed five hundred dollars per annum; such salaries and expenses shall be paid quarterly out of the State treasury.

Section 5. There shall be provided for the inspectors, at the expense of the State, all instruments and chemicals necessary for the proper discharge of their respective duties under this act, which shall be paid for by the State on the certificate of the chief inspector, and shall belong to the State.

Section 6. The chief inspector shall have an office in the State House, in which shall be carefully kept the maps and plans of all mines in the State, and all records, correspondence, papers, apparatus and property pertaining to his duties, belonging to the State, and which shall be turned over to his successor in office. The district inspectors shall have their offices in such place in their respective districts, as will be most central and convenient to the mining region of their respective districts, and shall keep and preserve in their offices, all maps, plans or other papers belonging to their offices, in such manner as shall be of easy access and convenient ref-

erence to persons entitled to examine them.

Section 7. The chief inspector shall issue such instructions, and make such rules and regulations for the government and guidance of the district inspectors, not inconsistent with the powers and duties vested in them by this act, as shall secure uniformity of action and proceedings throughout the different districts, and he may order one district inspector to the assistance of any other district inspector or make temporary transfers of district inspectors, when in his judgment the efficiency or necessity of the service demands or permits, and he may, with the consent of the Governor, remove any district inspector at pleasure. The chief inspector shall render such personal assistance to the district inspectors, as they from time to time, may require, and shall make such personal inspection of mines, as he may deem necessary and his other duties will permit. He shall keep in his office and carefully preserve, all maps and plans of mines, and other papers and reports required by law to be filed with him, and so arrange the same as shall make them a permanent record of ready, convenient and connected reference; he shall compile and consolidate the reports of the district inspectors, and annually, on or before the first day of November, make a report for the preceding year, ending with the month of June, to the Governor, of all his proceedings as well as of those of the district inspectors, and stating in such report, the condition and operation of the different mines of the State, the number of mines, the number of persons employed in and about such mines, the amount of coal, iron ore, limestone, fire-clay or other minerals mined in the State, so far as he has been able to obtain such statistics. He shall also include in such report, such facts relative to the mineral resources of the State, and the development of the same as shall in his judgment, be of public interest; he shall enumerate all accidents, and the manner in which they occurred, in and about the mines, and give all such other information as he may deem useful and proper, and make such suggestions as he deems important, relative to mines and mining, and any other legislation that may be necessary on the subject for the better protection and preservation of the health and lives of the persons engaged in such industry.

SECTION 8. The chief inspector of mines shall trace or transfer, to the copies of mine maps or plans in his office, the progress of each mine for each six months as shown upon the tracings of such progress furnished him by the operators of such mines, as hereinafter required; and the chief inspector shall furnish to each district inspector of mines, tracings of the maps of the mines or of such part or parts of such mines in his district, as the district inspector may require and the chief inspector may deem necessary for the purpose of enabling each district inspector to fully comprehend the methods or systems of working, draining and ventilating such mines, and to enable him to give proper advice or instructions to the operators of such mines, as to any improvements or remedies that may be required in such methods or systems; but the chief inspector is not hereby

required to furnish copies of any maps not in his office.

Section 9. The chief inspector and district inspectors shall give their whole time and attention to the duties of their respective offices; it shall be the duty of the district inspectors to examine all the mines in their

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respective districts as often as possible, but at least once in every three months, to see that all the provisions and requirements of this act are strictly observed and carried out; they shall particularly examine the works and machinery belonging to any mine, examine into the state and condition of the mines as to ventilation, drainage and general security to the health and lives of all persons working in and about the mines; the district inspectors shall make a record of all examinations of mines in their respective districts, showing the date when made, the condition in which the mines are found, the extent to which the requirements of this act are observed or violated, the number of accidents, injuries received, or deaths in and about the mines, and the cause of the same, number of mines in their respective districts, the number of persons employed in and about each mine, so far as they have been able to obtain such statisties, together with all such other facts and information of public interest concerning the condition of the mines, development and progress of mining in their respective districts as they may think useful and proper, which record shall on or before the first day of February, May, August and November, in each year, be filed with the chief inspector, to be by him recorded, and so much thereof as may be of public interest, to be included in his annual report; should any district inspector find any of the provisions or requirements of this act violated, or not complied with in or about any mine, he shall immediately in writing require the operator of such mine to proceed at once to remedy any deficiencies or pernicious practices in the working, drainage or ventilation of such mine, and unless the said requirements are within a reasonable time complied with and the provisions of this act fully carried out and obeyed, such district inspector shall institute such proceedings as may be necessary for the collection of the fines prescribed by the various sections of this act for each and every violation of this act of which he deems such operator, or the mining boss in charge of such mine or any other person working or employed in or about such mine, guilty.

Section 10. For the purpose of making the inspections and examinations provided for in this act, the chief inspector and district inspectors shall have the right to enter any mine at all reasonable times, by day or by night, but in such manner as shall not unnecessarily obstruct the working of the mine; and the operator of such mine shall furnish the means and facilities necessary for such entry and inspection; and if such operator shall refuse to permit such inspection, or fail to furnish the necessary facilities for such entry, examination and inspection, he shall be guilty of a misdemeanor and be fined not less than two hundred nor more than five hundred dollars for each and every such offense, which fines shall be collected in the name of the State of West Virginia at the suit of the inspector, to whom such entry was refused, or to whom such facilities were not furnished as by this section required, and the amount so collected

shall be paid into the State treasury.

Section 11. The operator of every mine in which ten or more persons are employed at the same time, where the same has not already been done, shall make or cause to be made, an accurate map or plan of the working of such mine, on a scale to be stated and shown thereon of one hundred feet to the inch, if the area of such mine and its prospective workings shall not exceed five hundred acres; where said area exceeds five hundred aeres, the scale of such map or plan shall be two hundred feet to Such map or plan, whether heretofore or hereafter made, shall show all the workings of such mine, the general inclination of the seam or strata of mineral in which such mine is being operated, the area mined or excavated, and the location and connection with such excavation of the mine, of the lines of all adjoining lands, and the name or names of each owner or owners, so far as known, marked on each tract, and the original or a copy of such map or plan shall be kept in the office at the mine at all times and open to the inspection of the chief inspector and district inspectors of mines at all reasonable times, who shall have the right to take copies of said map or plan. A true copy of every such map or plan

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made upon good tracing cloth, shall be delivered by such operator to the chief inspector of mines within six months from and after the passage of this act, to be preserved among the records of his office, and open to inspection and turned over to his successor in office. During the months of January and July in each year, such operator shall make or cause to be made such additions to such map or plan as shall accurately show the progress of all the workings of said mine during the six months preceding the first day of January and the first day of July of each year; and the operator of such mine shall furnish to the chief inspector during the months of January and July in each year, an accurate copy, upon good tracing cloth, of such additions to said map or plan. If the operator of such mine shall fail to comply with any requirement of this section for the space of one month over and above the time allowed in this section for the performance and fulfillment of all its requirements, then such operator shall be liable to a fine of ten dollars for each and every day after the expiration of said month until each and every requirement of this section is fully complied with; which fines shall be collected in the name of the State of West Virginia at the suit of the chief inspector, and the amount so collected shall be paid into the State treasury.

Section 12. When any mine is exhausted and is about to be abandoned, and before the same is abandoned or any pillars drawn therein preparatory to abandonnent, the operator of such mine shall make or cause to be made an accurate map or plan of such mine, on a scale, in accordance with the requirements as to scales, of the preceding section, showing the area and workings of the same to the day of abandoning or of drawing pillars preparatory to abandoning, and file such map within sixty days thereafter at the office of the chief inspector of mines; such map shall have attached thereto the sworn certificate of the mining engineer making the map, and of the mining boss in charge of the underground workings of such mine, that such map is strictly accurate. If the operator of such mine shall fail to comply with any of the requirements of this section within the time herein specified, then said operator shall be liable to a fine of twenty dollars for each and every day after the expiration of said sixty days, until said requirements are fully complied with; which fines shall be collected and disposed of in the same manner as required by

Section 13. In order that all maps or plans and copies thereof required to be made by the two preceding sections, shall correspond as to signs used for representing thereon all doors, stoppings, brattice, regulators, etc., and in order that such maps or plans and copies thereof may be fully comprehensible as to the methods of ventilation, drainage and working in use in such mines, the operator of every such mine shall cause all such maps or plans and copies thereof to be so made as to show, accurately and clearly, all doors, brattice, stoppings, regulators, air-crossings, air-splits, break-throughs, air-ways, turnaces or other ventilating apparatus or appliances, pillars, rooms, entries, haul-ways, drainage-ways, travelingways, shafts, slopes, inclined planes, the out-crop of the seam and the direction and degree of the general inclination thereof, in which such mine is worked, the direction of the air-currents and of drainage, and the position of pumps, sumps and syphons of such mine, in accordance with a chart of conventional signs to be furnished each operator by the chief inspector. If the operator of such mine shall fail to comply with the requirements of this section, he shall be liable to a fine of not less than one hundred nor more than two hundred dollars, which fine shall be collected and disposed of as required by section H of this act.

Section 14. The operator of every mine in which ten or more persons are employed at the same time, where the same has not already been done, shall cause such mine to be well drained within three months from the passage of this act; and shall, so long as such mine is being operated, keep it well drained so that all the roadways of that portion of the mine which is being operated and all roadways leading thereto which are used as haulways or traveling-ways may be traveled by persons on foot without wetting



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their feet; and such operator shall provide that wafer shall not be dammed back in old, abandoned or unused workings of such mine, to such an extent, or in such a manner, as to be a source of danger to the health or life of any person, or persons, working in such mine, or h any mine contiguous thereto.

SECTION 15. The operator of every mine shall, within three months from the passage of this act, where the same has not already been done, cause all the roadways in or leading to any part, or parts, of such mine as are being used or operated, to be made safe and secure against aecident to any person traveling therein from the falling of rock, coal or other mineral or material from the roof or sides of such roadways, by timbering, or walling, or taking down any loose or dangerous pieces of such roof or sides; and the operator of such mine shall, so long as such mine is operated, cause such roadways to be kept safe and secure as above required. And it shall be the duty of the operator of every mine, in which the roof is liable to fall in the working places, to provide for and have constantly kept in each and every working place, in which the roof is liable to fall, and at or near the face of such working place, a sufficient amount of timber of the proper size and kind to be used by the persons working in such place to secure any rock or coal overhead, at the face of such working place and for a distance of twenty feet back therefrom, that may be liable to fall; and any miner who shall fail or refuse to keep the roof of his working place well and securely propped from the face thereof back for a distance of twenty feet, or to sprag coal under which he may be mining, shall be guilty of a misdemeanor and

from the face thereof back for a distance of twenty feet, or to sprag coal under which he may be mining, shall be guilty of a misdemeanor and liable to a fine of not less than ten nor more than twenty dollars for each offense.

Section 16. The operator of every mine in which ten or more persons are employed at the same time, shall, where the same has not already been done, provide and establish within three months after the passage of this act, for every such mine, a proper and sufficient system of pure air ventilation of not less than one hundred cubic feet per minute per person employed in such mine, and three hundred cubic feet per minute per horse or mule employed in such mine, and as much more as may be necessary, which shall, so long as the mine is operated, be constantly maintained, circulated and distributed throughout the entire mine in such a manner as to dilute,

render harmless and expel the poisonous and noxious gases and impure air from each and every working place in the mine and from all the roadways leading thereto, so that the entire mine, so far as the same is used, shall be in a healthful and safe condition for the persons working herein, and all working places and the road-ways and traveling-ways lead gthereto shall be kept clear of standing gas, and no working place shall be driven more than one hundred and twenty feet in advance of a break-through or airway; and all break-throughs or air-ways, except those last made near the working faces of the mine, shall be closed up and made air-tight by stoppings, trap-doors or otherwise so that the currents of air in circulation in the mine may sweep to the interior of the mine where the persons employed therein are at work: Provided, That if no tire-damp is given off in such mine and no powder or other explosives used therein, workingplaces may be driven more than one hundred and twenty feet ahead of a break-through or air-way by obtaining the written consent of the chief inspector, but not otherwise; and no working-place in such mine shall be driven further in advance of a break-through or air-way than is specified in such written consent; but if it is preferred by the operator of such mine to use a brattice for the purpose of conducting the air-current up to or near the face or any working-place in such mine instead of making breakthroughs or air-ways, such brattice may be used: Provided, that such brattice shall not be longer than three hundred feet, and that it shall be so constructed as to conduct an ample quantity of air within such a distance of the face of the working-place in which it is used as to properly and thoroughly ventilate the face and all portions of suchworking-place in

use.

Section 17. The operator of every mine in which ten or more persons



are employed at the same time, where the same has not already been done, shall provide for such mine, within three months after the passage of this act, some artificial means of producing ventilation, such as fans, furnaces, steam-jets or other contrivances, of such capacity and power as to produce and maintain an abundant supply of pure air, for the ventilation of all the workings of such mine, which shall be kept constantly and regularly in operation at all times while such mine or any part thereof is being worked. But in case a furnace shall be used for ventilating purposes, it shall be so built as to prevent the communication of fire to any part of the works or timbering of such mine, or to the coal seam; but a furnace or fire shall not be used or allowed for any purpose, in any mine in which tire-damp is known to exist or be given off.

Section 18. The operator of every mine in which fire-damp has been found or may hereafter be found, shall for six months from and after the last time such gas has been found or may hereafter be found in any part of said mine, cause all the working-places thereof and all the road-ways leading thereto to be carefully inspected by a competent person or competent persons with a safety-lamp, every morning, and if a night shift is employed, every evening, immediately before the time for commencing work in any part of such mine, and such competent person or competent persons shall make a true report of the condition of such mine and all the workings and roadways thereof, so far as ventilation is concerned, and a workman shall not be allowed to go to work in any part of such mine until such part and the roadways leading thereto have been reported by such eompetent person or competent persons to be safe. Every such report shall be recorded without delay, immediately after such inspection, in a book which shall be kept for the purpose at the mine, and every such report shall be signed by the person making the same, and such book shall be so arranged and situated that each and every person working in such mine may read such report before entering the mine.

Section 19. The operator of every mine in which fire-damp has been found or may hereafter be found, shall, after six months have clapsed from and after the last time fire-damp has been found or may hereafter be found in any part of said mine, cause all the working-places thereof and all the roadways leading thereto to be carefully inspected in the same manner as required by regtion 18 of this act, every Monday morning immediately before the time for commencing work in any part of such mine, and a report of such inspection shall be made and recorded as required by section 18 of this act; and a workman shall notbe allowed to go to work in any part of such mine on a Monday, until such part and the roadways leading thereto have been reported by such competent person or competent persons to be safe.

Section 20. The operator of every mine in which fire-damp has been found, or may hereafter be found, or in which it may be found necessary or advisable to use safety-lamps, either for inspecting or working any part, or parts, of such mine, shall provide such safety-lamps, which shall be the property of such operator, who shall cause the same to be kept at all times in proper order and condition for the purposes for which they may be used.

SECTION 21. For the purpose of enabling the chief inspector of mines to make such report as is required by section 7 of this act, the operator of every mine is hereby required to give accurate information to the chief inspector, upon blanks furnished by him, as to the quantity of coal, iron ore, limestone, fire-clay or other mineral mined from such mine and what disposition has been made thereof, the number of persons employed in such mine on an average, and the number of persons employed outside the mine and in what capacity, and all other information, not of a private nature, which may be of public interest; such report shall be made by the operator of each and every mine in the State to the chief inspector of mines on or before the first day of August of each year, for the preceding year ending with the month of June. If the operator of any mine shall tail to comply with any of the requirements of this section within the time herein speci-

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fied, then said operator shall be liable to a fine of two hundred dollars, which fine shall be collected and disposed of as required by section 11 of this act.

Section 22. Whenever loss of life or serious personal injury shall occur by reason of any explosion or of any accident whatsoever in or about any mine, the operator of such mine, or in his absence the mining boss or person having charge of such mine, shall at once report the facts thereof to the mine inspector of the district in which such mine is situated, and the said inspector shall, if he deem it necessary from the facts reported, immediately go to the scene of said accident and make such suggestions and render such assistance as he may deem necessary for the safety of the men. And the said inspector shall investigate and ascertain the cause of such explosion or accident, and make a report thereof to the chief inspector of mines, and the district inspector shall, as soon as possible after the receipt of such report of such accident from the operator of such mine, forward the same to the chief inspector who may also, if he deems it necessary, assist such district inspector in such investigation, and to enable any inspector of mines to make such investigations, he shall have the power to compel the attendance of witnesses, and administer oaths to them, and the cost of such investigations shall be paid by the county in which such accident has occurred, in the same manner as costs of coroners' inquests are now paid. If the operator of any such mine, or in the absence of the operator, the mining-boss or person having charge of such mine, shall fail to give notice to the district inspector of mines, of any such accident within twentyfour hours after the occurrence thereof, such person so failing to comply with this section shall be liable to a fine of not less than two hundred nor more than five hundred dollars, to be collected and disposed of as required by section 10 of this act.

SECTION 23. The operator of every mine operated by shaft or slope shall provide and maintain suitable means of signaling between the bottom and top thereof, and he shall provide and maintain a metal tube from the top to the bottom of such slope or shaft, shitable for the free passage of sound therein, so that conversation may be held between persons at the bottom and top of the slope or shaft, and he shall also provide and maintain safe means of hoisting and lowering persons in said slope or shaft, for which purpose the cages used therein shall have a sufficient cover of boiler iron overhead, and be furnished with approved safety-catches to prevent the falling of the cage down the shaft in case of the rope breaking or the loosening or disconnecting of the cage or machinery from the rope, and the shaft shall be provided with proper and sufficient guides for conducting the eages, and there shall be on every drum of every machine suitable and adequate horns or flanges to prevent the ropes slipping off such drum, and to every such drum shall be attached an adequate brake to prevent accident in ease of the failure or breakage of the machinery, and there shall be provided, approved safety-gates at the top of such shaft, and there shall be provided some approved automatic contrivance to prevent over-winding, and all the machinery, repes, cages and appliances in and about such shaft or slope shall be amply strong and secure. If the operator of such mine shall fail to comply with any requirement of this section within six months from and after the passage of this act, or shall after that period fail to maintain any thing or appliance by this section required, or to keep such shaft or slope and all its machinery and appliances in a safe condition, so long as such mine is being operated, he shall be hable to a fine of not less than two hundred nor more than five hundred dollars for each and every such offense.

Section 24. No operator of any mine operated by shaft or slope, shall place in charge of any engine, whereby persons are lowered into or hoisted out of such mine, any but an experienced, competent and sober person not under the age of eighteen years and no engineer in charge of such engine shall allow any person, except such as may be deputed for that purpose by the operator of such mine, to interfere with such engine or any part of the machinery connected therewith, and no person shall interfere with any

such engine or machinery or in any way intimidate or interfere with such engineer in the discharge of his duties, and in no case shall more than ten persons ride at one time upon any cage or car in any slope or shaft, and no person shall ride upon a loaded cage or ear in any slope or shaft, nor shall any coal or other mineral or material be hoisted out of or lowered into any slope or shaft while persons are descending or ascending the same.

SECTION 25. No boy under twelve years of age, or female person of any age, nor any minor between the ages of twelve and sixteen years, unless he can read and write, shall be allowed to work in any mine, and in all cases of minors applying for work, the operator of every mine shall see

that the provisions of this section are not violated.

Section 26. The operator of every mine where the same has not already been done, shall, within three months after the passage of this act, employ a competent and practical inside overseer, to be called mining boss, who shall keep a careful watch over the ventilating apparatus, the air-ways, the traveling-ways, the pumps and sumps, the drainage and the timbering, to see, as the miners advance their excavations, that all coal, slate or rock overhead is carefully secured against falling, and to see that all the requirements of this act, as to drainage, ventilation and general safety, are complied with by the miners and persons under his charge: Provided that such operator, it competent, may himself act in the capacity of mining boss

Section 27. Such mining boss shall, on each Monday, or at least once in each week, when the mine is being operated, of which he has charge, measure the quantity of air passing, at some point in the intake and at some point in the return air-current, near the inlet and outlet, and at the most advanced break-through of each entry, or in such manner as shall determine the total quantity of air in circulation in the mine and the quantity passing in each split, and shall note the same and the number of persons and animals supplied thereby, and keep a record of such measurements and of the number of persons and number of animals supplied with air by each split and report the same to the inspector of mines of the dis-

trict on or before the fifth day of each month.

Section 28. Such mining boss shall provide and see to it that all doors used in assisting, or in any way affecting the ventilation of the mine under his charge, shall be so hung and adjusted as to close themselver and remain so, when not held or fastened open, and that the main air-doors on the haul-ways and traveling-ways shall be double so that both such main doors shall not be open at the same time, and that an extra door shall be fixed so as to be closed only in the event of an accident to one of the others, and where the district inspector of mines shall so require, that the sides and top of such main doors shall be well built with stone or brick and mortar, and that all main doors are provided with an attendant who shall constantly guard and keep such doors shut while such mine is being operated.

SECTION 29. Such mining boss, having charge of any mine in which firedamp is given off, shall divide such mine into panels or districts, each ventilated by a separate current or split of pure air, and such mining boss shall see to it that forty persons shall be the greatest number that shall

work in any one panel or district at the same time.

Section 30. The mining boss of every mine shall see to it that in every working of such mine approaching any place where there is likely to be an accumulation of fire-damp, and in every working-place in which fire-damp is given off so freely that such working-place cannot be kept sufficiently free from gas to prevent the same showing its presence by a blue cap on the flame of a safety-lamp, and in any place or part of such mine where there may be the slightest danger from the use of naked lights, no lamp or light other than a locked safety-lamp shall be allowed or used, and such safety-lamps shall be of such construction as to extinguish their own light whenever filled with an explosive mixture of gas and air.

Section 3t. The mining boss in charge of any mine in which tiredamp has been or may be hereafter found, shall appoint a competent per-

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son or competent persons, as the case may require, who shall keep clean and in good order and condition all safety-lamps that may be used in the mine, and who shall make the inspections thereof, as required by sections 18, 49 and 20 of this act, under the direction of such mining boss: *Provided, however*, that such mining boss may perform the duties of such competent person when such performance shall not interfere with the due performance of his other duties.

Section 32. The mining boss of every mine in which safety-lamps are required to be used shall establish a station or stations in such mine upon the intake air-way or air-ways at such place or places where there shall be no danger from the use of naked lights, and at such station or stations the competent person or competent persons, provided for and required by sections 18, 19 and 31 of this act, shall examine every safety-lamp and sec that the gauzes and glasses thereof are clean, and that the lamp is filled with oil and lighted, and ascertain it to be in every way secure and securely locked, and supplied with an efficient shield before if is taken into the workings for use; and in any part of a mine in which safety-Jamps are required to be used, they shall not be used until they have been so examined and found secure and securely locked, and shall not without due authority be unlocked, and in such part of a mine a person shall not, unless he has been appointed for the purpose by the mining boss of such mine, have in his possession any key or contrivance for opening the lock of any safety-lamp, or any match or apparatus for striking a light, or any tobacco-pipe, eigar or cigarette.

Section 33. The mining boss of every mine in which the road-ways are liable to be covered with dry coal-dust and which rises and floats in the air from the passage of wagons or persons, or from the velocity of the air-current, shall have all such road-ways kept clear of such dust or the same kept constantly dampened.

Section 34. A shot shall not be fired in any place in any mine where the floor of such place is covered with dry coal-dust within fifty feet of the point where such shot is to be fired, until such coal-dust has been cleanly swept away or thoroughly dampened with water, by the person or persons working in such place; and it shall be the duty of the mining boss in charge of such mine or the person in charge of such part of such mine, to see to it that this section is strictly complied with.

SECTION 35. If at any time it shall be found by the mining boss in charge of any mine, or by the person for the time being in charge of any mine or any part thereof, that by reason of noxious gases prevailing in such mine or such part thereof, or from any cause whatever, the mine or the said part thereof is dangerous, every workman shall be, with all possible dispatch, withdrawn from the mine or such part thereof as is so found dangerous, and a competent person appointed for the purpose by the mining boss, or the mining boss himself if he deems it necessary, shall inspect the mine or such part thereof as is so found dangerous, and if the danger arises from fire-damp or the same is suspected or hable to be in such dangerous part, he shall inspect the same with a locked safety-lamp, and in every case shall make a true report of the condition of such mine or part thereof, and a workman shall not, except in so far as is necessary for inquiring into the cause of the danger or for the removal thereof, or for exploration, be readmitted into the mine or such part thereof as was so found dangerous, until the same is stated by such report not to be dangerous. Such report shall be recorded in a book which shall be kept at the mine for the purpose.

Section 36. The mining boss of any mine shall, when he discovers that

Section 36. The mining boss of any mine shall, when he discovers that the ventilation of any mine or of any part thereof, under his charge, is insufficient, or that for any reason there is danger to the health and safety of the persons employed in such mine, forthwith inform the operator of such mine of such deficiency of ventilation or of such danger, or of any other matter that needs to be remedied or replaced in or about such mine; and it shall thereupon be the duty of such operator to at once furnish the

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necessary means and material to such mining boss to enable him to bring

such mine fully within the requirements of this act.

Section 37. Every person using a safety-lamp in any mine or part of a mine in which safety-lamps are required to be used, shall not interfere with such lamp in any way whatever beyond the necessary trimming of the wick with the picker; and he shall be careful to keep such lamp suspended from the loop or ring in the top thereof, and out of the way of all danger from being injured by the swing of the pick or any other implement, or by flying coal or other material from a shot, or by fall of roof or coal, or by being struck by anything whatever; and he shall keep such lamp away from the goaf or old workings; and should any such person, using a safety-lamp, lose his light he shall take such lamp to the nearest lamp station to be re-lighted, re-examined, and locked by some authorized person, before being again used.

SECTION 38. Should any accident happen to any safety-lamp whilst in nse in any part of any mine where safety-lamps are required to be used, by which the gauze is injured or oil spilled thereon, or such lamp be rendered in any way unsafe, the person using such lamp shall immediately extinguish the light by drawing the wick down within the tube with the picker, or by such other means as shall be equally safe, and take such lamp to the nearest lamp station in the mine, and such lamp shall not be again used until it has been properly examined, made safe, lighted and securely

locked by some authorized person.

SECTION 39. Any person working by the light of a safety-lamp in any part of any mine, shall, whenever he shall observe gas in such lamp, pull down the flame with the picker, and with the shield down and the lamp sheltered, carefully and slowly remove it, unless the lamp shall at once extinguish its light, and leave the place at once and, in either event, immediately report the same to the person in charge of such mine or of the part thereof in which such gas was so observed, and such workman shall not return to work in such place again until the same has been examined and pronounced safe by some competent person in the manner required by section 35 of this act.

Section 40. Any person who shall, in any part of any mine, observe any appearance of fire-damp, shall immediately retire from such place and report the same to the person in charge of such mine, or of such part thereof in which such appearance of gas was observed, who shall immediately take such measures and percautions as may be necessary for the proper ventilation and safe working of such place and of all parts of the mine, that are being used or worked, in accordance with the requirements of this

Section 41. Blasting powder or other explosive substance shall not be used in any mine except in accordance with the following rules and regulations:

(a) It shall not be stored in the mine.

(b) It shall be taken into the mine only in a case or canister containing not more than four pounds.

(c) Not more than one such case or canister shall be at any one time in

any working-place or other place.

Section 42. Blasting powder or other explosive substance shall not be used in any mine during three months after any fire-damp has been found or may hereafter be found in such mine, except in accordance with the following rules and regulations:-

(a) It shall not be taken into the mine or be in the possession of any

person in the mine, except in cartridges.

(b) A competent person, appointed as required by section 31 of this act, shall, immediately before the firing of each shot, examine the place where it is to be used, and the places contiguous thereto, and shall not allow the shot to be fired unless he finds it safe to do so, and a shot shall not be fired except by or under the direction of a competent person appointed for the purpose.

(c) If a blue cap shows on the flame of the safety-lamp in the place

where the shot is to be fired, it shall be fired only by such competent person when the persons ordinarily employed in the mine are out of the mine, or if the mine be divided into panels or districts, out of the panel or dis-

triet in which such shot is to be fired.

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Section 43. The mining boss in charge of every mlne in which firedamp has at any time been found or may hereafter be found, shall see to it that all entrances to any place in such mine not in actual course of working or extension, shall be properly and securely fenced across the whole width of such entrance, so as to prevent persons inadvertently entering the same; and no person shall, without due authority, enter such place so fenced, or any place, at the entrance to which, there is placed a danger board or danger signal.

Section 41. The operator of every mine worked by drift, shall not allow more than ten persons to work or be therein at the same time, unless there are to such mine two distinct and separate outlets, separated by natural strata of not less than twenty-four feet in breadth, which outlets shall be kept at all times, when the mine is being operated, available and safe as a means of ingress and egress for the persons employed in such mine; for each and every day that each and every person over and above the number by this section permitted, shall be allowed to be in such mine where such two outlets are not provided and maintained as above required, the operator of such mine shall be liable to a fine of fifty dollars, to be collected and

disposed of as required by section 10 of this act

Section 45. The operator of every mine worked by slope or shaft, shall not, after one year from the passage of this act, if the depth from the surface to the mine is less than one hundred feet, after eighteen months from the passage of this act, if the depth from the surface to the mine is between one hundred and two hundred feet, after two years from the passage of this act, if the depth from the surface to the mine is between two hundred and three hundred feet, after thirty months from the passage of this act, if the depth from the surface to the mine is between three-hundred and four hundred feet, after three years from the passage of this act, if the depth from the surface to the mine is between four hundred and five hundred feet, after forty-two months from the passage of this act, if the depth from the surface to the mine is between five hundred and six hundred feet, after four years from the passage of this act, if the depth from the surface to the mine is between six hundred and seven hundred feet, allow more than ten persons to work or be in such mine at the same time, unless there are to such mine two distinct and separate outlets, separated by natural strata, of not less than one hundred and fifty feet in breadth, which outlets shall be kept at all times, when the mine is being operated, available and safe as a means of ingress and egress for the persons employed in such mine, one or both of which outlets may belong to another mine, but in any event there shall be in the mne, a safe and convenient communication, of not less than four feet wide and three feet high between such outlets, and there shall be at each of such outlets, either in actual use or available for use atall times when the mine is being operated, proper apparatus for raising and lowering persons out of or into the mine. The time allowed above for the making of such outlets shall, for mines opened after the passage of this act, count from the date of the striking of the mineral, in which the mine is operated, by the first shaft or slope. For each and every day, after the expiration of the time herein allowed for the provision and construction of such two outlets, that each and every person over and above the number by this section permitted, shall be allowed to be in such mine where such two outlets are not provided and maintained in the manner and with the adjuncts and apparatus above required, the operator of such mine shall be liable to a fine of one hundred dollars, to be collected and disposed of as required by section 10 of this act.

SECTION 46. In every working-place which is being driven towards and in dangerous proximity to any place likely to contain a dangerous accumulation of water or gas, a bore-hole shall be kept not less than twelve feet in advance thereof, and when necessary, on the sides thereof; and tapered



wooden plugs shall be kept ready and convenient to be driven into such bore-hole whenever water or gas shall be tapped thereby; and it shall be the duty of the mining boss to see to it that this section is complied with.

Section 47. The operator of every mine shall provide that all the haul-ways of such mine, whether the cars are drawn by horse or other power, where such haul-ways are necessarily used as traveling-ways, shall be made sufficiently wide to admit of a person standing between the track and the side of such haulway without being in danger of being struck by a passing ear, or else, that refuge spaces, not less than five feet square and four feet high, be made and maintained along such haul-ways at intervals of not more than fifty yards, which refuge spaces shall be kept clear of all obstructions and water, and shall be white-washed at least once in every three months; and it shall be the duty of the mining boss of such mine to see to it that this section is complied with.

SECTION 48. The operator of every mine shall provide and see to it, that the top of every shalt of such mine, which is for the time being out of use, or used only as an air-shaft, shall be securely fenced, so as to prevent per-

sons or animals falling down the same

SECTION 49. If in any respect (which is not provided against by any express provision of this act) any inspector find any mine or any part thereof, or any matter, thing or practice in or connected with any such mine, to be dangerous or defective, so as in his opinion to threaten or tend to the bodily injury of any person, such inspector may give notice thereof in writing to the operator of such mine, and shall state in such notice the particulars in which he considers such mine, or any part thereof or any matter, thing or practice, to be dangerous or defective, and require the same to be remedied; and unless the same be forthwith remedied the inspector shall also report the same to the chief inspector of mines, who shall immediately, if he deems it necessary, go to such mine and examine into the matter, and his decision thereon shall be final; and unless the operator of such mine shall within the time, which such chief inspector shall allow, remedy such dangerous or defective matter, thing or practice, he shall be guilty of a misdemeanor and liable to a fine of fifty dollars for each and every day such danger or defect shall exist or continue after the time so allowed for its remedy.

Section 50. In every mine in which, the mining boss in charge thereof, or the chief or district inspector of mines, requires safety lamps to be used, all persons shall strictly observe the rules and regulations, for the use of such lamps, contained in this act, and all directions which may be given from time to time by the mining boss in charge of such mine or by the chief or district inspector: *Provided*, such directions shall not conflict with

the rules and regulations of this act.

Section 51. Every person employed in or about every mine shall observe such directions with respect to working as may be given to him with a

view to comply with the requirements of this act.

Section 52. Any miner, workman or other person who shall knowingly injure, damage or destroy, or without proper authority remove or render useless any fence, feneing, casing, lining, guide, means of signaling, signal, cover, chain, flange, horn, brake, indicator, steam-gauge, water-gauge, safety-valve, barometer, air-course, brattice, air-door, or any other appliance or thing provided in or about any mine in compliance with this act, or shall obstruct or throw open air-ways or regulators, or shall open a door of the mine and not close the same again, or close a door that should be lett open, or shall enter into any part of the mine against caution, or shall disobey any order given in pursuance of this act, or shall do any willful act whereby the health or lives of persons working in the mine, or the security of the mine or mines, or the machinery thereof is endangered, shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than ten nor more than one hundred dollars or by imprisonment or both at the discretion of the court.

* Section 53. When written charges of gross neglect of duty or malfeasance in office against any inspector is made and filed with the Governor,

signed by not less than fifteen coal miners, or one or more operators of mines, together with a bond in the sum of five hundred dollars, payable to the State, and signed by two or more responsible freeholders, and conditioned for the payment of all costs and expenses arising from the investigation of such charges, the Governor shall convene a board of examiners, to consist of two practical miners, one operator, one mining boss and one mining engineer, none of whom shall be in any way connected with such complaint either directly or indirectly, at such time and place as he deems best, giving ten days' notice to the inspector against whom the charges are made, and also to the person whose name appears first in the charges, and the board, when so convened, and having been first duly sworn, truly to try and decide the charges made, shall summon any witnesses so desired by either party, and examine them on oath, which may be administered by any member of the board, and depositions may be read on such examinations, as in other cases; and the board shall examine fully into the truth of such charges, and report the result of their investigation to the Governor; and the board shall award the cost and expenses of such investigation against the inspector or the persons signing the bond according to their finding, against said inspector or in his favor, which costs and expenses shall include the compensation of such board, of five dollars per day for each member, for the time occupied in the trial and in traveling from and to their homes; and the attorney-general shall forthwith proceed to collect such costs and expenses, and pay the same into the State treasury, on the certificate of the president of such board.

SECTION 51. The Governor shall remove any inspector of mines from office for incompetency, neglect of duty, malfeasance in office, drunken-

ness, immorality or for other good cause.

Section 55. Every day that any violation or non-compliance with any requirement of this act shall continue to exist, in or about any mine to which this act applies, shall be considered a separate and distinct violation of this act, and for each and every such violation of any of the requirements of any section of this act for which a special penalty is not therein provided, the penalty shall be, for an operator not less than fifty nor more than one hundred dollars; for a mining boss not less than twenty nor more than tifty dollars; for an assistant mining boss or fire boss or competent person, appointed by the operator or mining boss, not less than ten nor more than fifty dollars; and for a miner or any other person other than those above named, not less than tive nor more than fifty dollars; which fines shall be collected, from an operator in the manner set forth in section 10 of this net; from a mining boss, or other employe, either by the operator of the mine or by the district inspector of mines, but not by both; from an assistant mining boss or other employe, either by the mining boss or operator of the mine or by the district inspector, but only by one of them; which fines may be recovered by civil suit before a magistrate or other court or tribunal having jurisdiction in the case; said times when collected shall be paid into the Seate treasury, less the amount necessary to pay the costs of such suits, including lawyers' fees.

SECTION 56. In this act the term "operator" when used in relation to

any mine, means any person, or body corporate who is the immediate proprietor, or lessee or occupier of any mine, or of any part thereof, or the agent or manager in charge thereof, and does not include any person or body corporate who merely owns the land on which such mine is situated and receives a royalty, rent or fine from such mine, but any contractor for the working of a mine or any part thereof, shall be subject to this act in the same manner as if he were an "operator," but so as not to exempt the

operator from any liability.

The term "mining boss," when used in relation to any mine, means any person having, on behalf of an "operator," the care and charge of the working, drainage and ventilation of such mine.

The term "fire-boss" or "competent person" means the person or persons appointed in compliance with section 31 of this act and whose dutles are set forth in sections 18, 19, 20, 32, 37, 38, 39 and 42 of this act.



Section 57. This act shall apply to each and every mine which may be now or hereafter operated in this State, whether such mine be operated in coal, iron-ore, fire-clay, limestone or other mineral; and where not otherwise, by any section of this act, specially provided, all the sections of this act to take effect at the expiration of ninety days from the passage of the act; except the first, second and third sections, which shall take effect from the passage of the act.

SECTION 58. All acts or parts of acts inconsistent with the provisions of

this act are hereby repealed.

